Low-Energy Mechanism for Conversion of Ambient Microwave and T-Ray Photons into Positronic Photons and the Mechanism's Role in a Mechanism for Transforming Ambient Structure-Penetrating Light into Visible Spectrum Light in Support of Tactical Hyperspectral Imaging of a Qualitatively Higher Order

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Introduction

Infrared imaging sensors, although extant, feature a comparatively high cost of manufacture and operation in comparison to visible light sensors. No mechanism has, as yet, been established that is capable of directly transforming electromagnetism of a lower frequency into a higher frequency whilst preserving the integrity of the data carried in that electromagnetism. The addition of such a mechanism to our scientific repertoire would likely have ramifications beyond reducing the cost of IR photography.

Abstract

The properties of light allow for the mutual cancellation of waves given precise opposition of phase and allow amplitude to increase or decrease through the combination or diffusion of multiple waves, but the interaction of multiple emissions of light at a given frequency can never result in a combination of those waves that produces a combined wave with a frequency that is doubled. If they did, we would occasionally be able to view modified IR light with the naked eye given the right conditions.

The behavior of positrons as well as positronic photons are quite different from the behavior of classical photons and, provided that photons may be converted into positronic photons, these modified properties may enable the combination of two waves of light; one photonic and one posi-photonic; of the same frequency into a unified wave with double the frequency and yet retaining the full amplitude of the light not converted into posi-photonic energy with no mutual annihilation of the posi-photons and the photons occurring. It is a widespread misconception that positrons are a form of anti-matter that intrinsically annihilates when coming into contact with electrons.

In order to preserve phase synchronization between waves of photons and waves of posi-photons, the conversion of photons into posi-photons would need to occur in near-instantaneous fashion at the peak of oscillation but would need to be implemented using a low-energy, high-precision method. Since the spin direction of a photon relative to phase would be a known quantity, this would entail inverting that relative direction in a one-step process in order to transform spin relative to phase to the Magnusian from the natural counter-Magnusian. Ordinarily, this would involve either the use of high-energy X-Rays moving in

opposing directions or repeated interactions of a highly precise nature between two identical sets of waves of light.

One-Step Photonic to Posi-Photonic Conversion

Projections of cylindrical magnetic force placed in the path of light (exclusively at the fringes of its peaks in phase) would form the basis of the method of conversion. Whereas as skyrmion is a rotating magnetic field, several skyrmions may be arrayed in order to form a roughly cylindrical corridor of magnetism capable of applying axis spin in a particular direction to individual photons without distorting any other properties of the light waves those photons comprise. These cylindroscopic projections of magnetism supported by arrayed skyrmions would be stationary in position and would successfully invert the property of axis spin relative to phase without regard to amplitude or frequency, leaving intact the data one would wish to measure by dint of the symmetry created by the double-passage of the photons through the cylindro-skyrmionic projection.

Importantly, only every other wave of light should be inverted in this manner if one wishes to achieve the desired effect. A mechanism is required for ensuring that only every other wave is charge-inverted. This may be achieved by designing molecules forming the basis of the generated skyrmions so that they will invert their own magnetic rotational orientation with each light wave passing through the cylindrical field. A feedback effect would mechanically invert the internal geometry of the nickelate used to generate the fields, thus inverting the effect. In this way, every other light wave would be charge-inverted and those not being charge inverted would enjoy a slight boost in amplitude while remaining as conventional photons.

Once this conversion is achieved, the posi-photons would remain commingled with their non-converted counterparts so that the photons and their posi-photonic counterparts would travel together for a time with a subtle effect upon the traditional photons being exerted with each undulation of the light waves. The posi-photons would corkscrew around the oscillating photons and would "push aside" these photons creating new peaks and valleys of phase in place of the existing structure. This might be visualized as grasping a tube of Go-Gurt with an "O" formed with the thumb and forefinger of each hand, beginning with both hands at the center of the tube and sliding the two "Os" outward toward the ends of the tube, forcing the yogurt to the outer extremities of the tube. The opposing charge of the positive and negative components of these waves would cause the two to ultimately be refined into two collocated groupings, one positive and negative, each of which have double the frequency as they did at the outset and yet with the same relative amplitude and frequency as they did; preserving the data carried by the waves.

Once this is achieved, the posi-photonic component of the commingled energy waves may be converted through a complementary process back into classical

photonic energy, restoring the full amplitude of the photonic energy so that a full-quality IR imagine may be captured using a conventional visible light sensor of the converted IR light.

Conclusion

Ambient visible light would need to be filtered to prevent interference between the true visible light in the field of view and what might be termed the false-color detected IR, provided that one wishes to measure IR light in isolation.

While this approach would not be suitable for substantially altering light already in extremely high energy states (the conversion of EUV into X-Ray, for instance) lower-energy photons that could be meaningfully altered by powerful but compact magnetic fields could be converted using this approach in order to facilitate enhanced detection of these photons.

Additional possible applications include the enhancement of the detection of faint ambient microwaves and T-Rays to enable hyperspectral imagining that can "look through walls," a longstanding technical goal previously achievable only through active emission of powerful microwaves or T-Rays in controlled settings.